How far should anti-sway supports be added to cable trays



Overview

Not sure how far apart to space your cable tray supports? Use our free cable tray support spacing calculator to find the precise spacing.

Key Takeaways

Anti-sway supports for cable trays should be installed at key points such as tray ends, corners, T-junctions, and vertical runs, with spacing typically less than 2 meters for vertical runs and every 3–5 meters for horizontal runs. General GuidelinesAnti-sway supports are critical to maintain the stability of cable trays, prevent sagging, and reduce mechanical stress on cables. They are especially important in vertical runs, long horizontal spans, and at points where the tray changes direction or height.

Horizontal Runs

Supports should be installed at the start, end, and at every bend of the tray. For straight horizontal sections, supports are recommended every 3–5 meters depending on tray material, cable weight, and environmental conditions. Anti-sway braces may be added at intervals to prevent lateral movement, particularly in long spans or where trays are exposed to vibration or wind.

Vertical Runs

Vertical cable tray runs require supports fixed to the building structure. Spacing for vertical supports should preferably be less than 2 meters to ensure stability and prevent swaying. Cables within vertical trays should be secured at the top and every 1.

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5 meters to maintain order and reduce mechanical strain.

Special Points

Corners, T-junctions, and tray ends must always have fixed supports to distribute weight and prevent sagging. For long spans exceeding 30 meters, additional supports are necessary to maintain structural integrity. When installing parallel trays at the same height, maintain a minimum distance of 0.

6 meters between them to allow for maintenance and airflow. Standards and MaterialsIEC 61537 provides guidance on mechanical strength, load testing, and installation compatibility for cable trays and supports.

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S 7671 emphasizes that wiring systems must be supported to avoid undue mechanical strain and ensure fire safety, requiring fire-resistant support materials. Supports are typically made of steel or stainless steel, with corrosion-resistant coatings for industrial or outdoor environments.

Practical Considerations

Ensure anti-sway supports are compatible with tray type (ladder, perforated, or mesh). Consider environmental factors such as wind, vibration, or seismic activity when determining support spacing. Properly installed anti-sway supports improve safety, reduce cable stress, and facilitate maintenance and inspection.

By following these guidelines, cable tray systems will remain stable, safe, and compliant with international standards.

Article Content

Cable Tray Support Spacing: Key Guidelines Explained

The NEC requires that cable trays must be supported by members at an interval specified by the cable tray manufacturer, but not more than 5 feet for

NEC Article 392 Guide: Ensuring Compliance for Cable

Strong hangers or brackets should be used to ensure that cable trays do not fall or hang. According to the regulations under NEC 392.30, these

Cable tray support spacing calculator

Not sure how far apart to space your cable tray supports? Use our free cable tray support spacing calculator to find the precise spacing.

Cable Tray Installation Rules (NEC 392) – Electrical Trader

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Support spacing for cable trays must align with the manufacturer''s instructions, as outlined in NEC 392.30 (A). Generally, standard trays require supports every 6 to 10 feet, while

A Guide to Installing and Supporting Electrical Cable Trays

Cable Tray Support Span: The distance between supports is a critical calculation. The cable tray support span must be determined based on the manufacturer''s

Cable Tray Support Design Mistakes to Avoid

These problems rarely appear immediately. Instead, they develop gradually over months or years. This article will help you understand how cable tray support systems really work, how to

Cable Tray Spacing Standards for Installation and Safety

Other Cable Tray Spacing Requirements Spacing in Straight Sections For horizontal sections where cable trays are laid out in a straight line,

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Safely Installing, Maintaining and Inspecting Cable Trays

Cable trays are not raceways, but they are treated as a structural component of a facility''s electrical system. Cable trays are a part of a planned cable management system to support, route, protect and

Cable Tray Support Spacing: Key Guidelines Explained

The cable tray supports shall be designed to support the weight of the cables, and also any loads that may be applied to the trays from the outside, such as wind and earthquakes.

Guide to cable support systems

I support systems for cable support structures are used to bridge large loads and support spacings and to cre-ate complex section routes. The systems allow large support spacings of wide span systems

A Guide to Installing and Supporting Electrical Cable Trays

A professional guide to installing electrical cable tray systems per NEC Article 392. Covers support, securing cables, and fill calculations.

Best Practice Guide to Cable Ladder and Cable Tray Systems

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Cable ladder systems and cable tray systems are designed for use as supports for cables and not as enclosures giving full mechanical protection. They are not intended to be used as ladders, walk ways

B-Line series Cable Tray Design Considerations

As an industry leader in cable tray, Eaton offers one of the widest ranges of cable management solutions available in the market today with its B-Line series portfolio. With unmatched quality and service, we

How to Solve Excessive Cable Tray Installation Spacing?

Learn how to fix excessive cable tray installation spacing. Discover tips and solutions to improve safety, performance, and ease of maintenance for

Cable Tray Technical Guide A practical guide to product selection and ...

SOLID-BOTTOM CABLE TRAY Providing additional cable protection, solid-bottom cable tray is sometimes preferred to support and protect numerous small instrumentation and control cables.

Explaining NEC Article 392 on Cable Trays

NEC Article 392 explains cable trays, their components, appropriate wiring methods for cable trays, and instances where they are and are not

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